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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,628	02/04/2002	Byoung Yi Youn	GRANP1.001 C1	4249
20995	7590	10/09/2003	EXAMINER	
KNOBBE MARTENS OLSON & BEAR LLP			FULLER, RODNEY EVAN	
2040 MAIN STREET			ART UNIT	
FOURTEENTH FLOOR			PAPER NUMBER	
IRVINE, CA 92614			2851	

DATE MAILED: 10/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/067,628	Applicant(s) YOUN, BYOUNG YI	
	Examiner Rodney E Fuller	Art Unit 2851	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 19-24 and 28-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 19-24 and 28-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 3, 2003 has been entered.

Remarks

2. In response to applicant's Amendment, dated July 3, 2003, the examiner acknowledges the cancellation of claim 38. Claims 1-15, 19-24 and 28-37 are pending.

3. Regarding the 35 U.S.C. 102(b) rejection of claims 1, 2, 3, 9, 10, 13, 14, 19, 20, 24, 28, and 30-38 as being anticipated by Allard, et al. (US 4,743,964), the applicant makes the argument that "Allard fails to show the inverting devices for receiving and inverting the plane images recited in the Claims 1, 9 and 19." However, as stated in the last office action examiner acknowledges that Allard utilizes two sets of mirrors in contrast to the preset invention which utilizes only a single set of mirrors. However, the examiner maintains that the monitors (12, 22) and the first set of mirrors (14, 24) can be considered in combination as the "display device" equivalent to that of the claimed invention. Thus, the examiner has considered the applicant's arguments and maintains the rejection.

4. Regarding amended claim 20, the applicant makes the argument that Allard does not disclose the limitation of “after the receiving and inverting, displaying the inverted first and second plane images.” However, the examiner maintains that the monitors (12, 22) and the first set of mirrors (14, 24) can be considered in combination as the “display device” equivalent to that of the claimed invention and would allow the display of the inverted first and second plane images after the receiving and inverting. Thus, the examiner has considered the applicant’s arguments in light of the amended claim and maintains the rejection.

Regarding amended claim 32, the applicant makes the argument that Allard does not disclose “that the first and second display devices directly display the inverted images without use of mirrors.” Thus, the examiner has considered the applicant’s arguments in light of the amended claim and withdraws the rejection of claims 32-37 over Allard. However, Carollo (US 5,912,650) clearly shows the newly claimed limitations.

Regarding Carollo, the applicant makes the argument “that Carollo reference does not inherently disclose either ‘the display devices that output the inverted images’ or ‘displaying inverted images’ recited in claims 1, 9, 19 or 20.” The examiner notes that the mirrors in Carollo (Fig. 1, ref.# 109) are plane mirrors and will invert an image by the mere fact that they are plane mirrors. Further, the examiner maintains that the image generators (Fig. 1, ref.#s 101, 105) would have to produce and “inverted” image in order to allow the mirrors (Fig. 1, ref.# 109) to invert the image and to produce a properly oriented image for the viewer. Thus, the examiner maintains that the functions of the mirror and display devices “must necessarily result from the prior art reference” (i.e., The mirrors inherently invert the images and the image generators inherently invert the images in order that the resulting image be viewed with proper orientation.).

Regarding the applicant's (Byoungyi Yoon) declaration that "the display devices of Carollo reference do not necessarily invert the images, and that Carollo does not inherently show image inversion" is merely argumentative and is not persuasive.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 3, 9, 10, 13, 14, 19, 20, 24, 28, 30 and 31 are rejected under 35

U.S.C. 102(b) as being anticipated by Allard, et al. (US 4,743,964).

Allard (US 4,743,964) discloses all the structure set forth in the claims.

Regarding claims 1, 2, 9, 19, 20, Allard (US 4,743,964) discloses "left and right image inverting devices (Fig. 1, ref.# 14, 24) for receiving left and right plane images of an object and inverting the left and right sides of the left and right images, respectively, each plane image be produced at different positions with respect to the object; left and right plane image display devices (Fig. 1, ref.# 12, 22) simultaneously outputting the inverted left and right plane images; a left reflection mirror (Fig. 1, ref.# 15), on which the inverted left image is incident and reflected at the same angle, so that the reflected left image is perceived by a left eye of a viewer; and a right reflection mirror (Fig. 1, ref.# 25), on which the inverted right image plane is incident and reflected at the same angle, so that the reflected right image is perceived by a right eye of a viewer."

Regarding claims 3 and 13, Allard (US 4,743,964) discloses "...wherein each of the left and right plane image display devices comprise a television monitor, a big-screen wall mount TV, a computer monitor, or a LCD)." (See Figure 1, ref.# 12, 22 and column 2, line 58)

Regarding claims 10 and 20, Allard (US 4,743,964) discloses "...wherein the first and second mirrors are arranged such that the two mirrors as a whole are substantially 'V' shaped."

Regarding claims 14 and 24, Allard (US 4,743,964) discloses "...wherein the first and second positions are substantially symmetric with respect to a line that passes the first object in a latitudinal direction." (See Fig. 1, note all components are symmetrical along a line passing through the center of the viewer)

3. Claims 32-37 are rejected under 35 U.S.C. 102(b) as being anticipated by Carollo (US 5,912,650).

Regarding claim 32, Carollo discloses "first and second display devices (Fig. 1, ref.# 109) configured to receive first and second plane images of an object and invert the left and right sides of the first and second plane images, respectively, and to substantially simultaneously output the inverted first and second plane images, respectively, each image being produced at first and second positions with respect to the object; a first mirror (Fig. 1, ref.# 111 above ref.# 103) located between the first and second display devices and configured to receive and reflect the first inverted image in the first direction; and a second mirror (Fig. 1, ref.# 111 above ref.# 107) located between the first and

second display devices and configured to receive and reflect the second inverted image in the first direction; wherein the first and second display devices are located on opposite sides of the first and second mirrors, and wherein the first and second display devices directly display the inverted images without the use of mirrors.”

Likewise, Corollo discloses all the structure set forth in dependent claims 33-37.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allard, et al. (US 4,743,964).

As best the examiner is able to ascertain the claimed invention, Allard (US 4,743,964) discloses all the structure set forth in the claims except “...wherein, in the left and right reflection mirrors, incident angles of the left and right plane images and reflection angles of the images reflected to the viewer are adjusted in a range of about 30-50 degrees.” It would have been obvious to one having ordinary skill in the art at the time the invention was made to select the incident angles of the left and right plane images and reflection angles of the images reflected to the viewer to be about 30-50

degrees, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

6. Claims 5-8, 11, 12, 15, 21, 22, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allard (US 4,743,964) in view of Ricks (US 4,190,856).

As best the examiner is able to ascertain the claimed invention, Allard (US 4,743,964) discloses all the structure set forth in the claims except that Allard (US 4,743,964) discloses a single set of display devices, while the present invention in claims 5-8, 11, 12, 15, 21, 22, sets forth where the images are produced by multiple display devices and combined with 50/50 mirrors (beamsplitters). However, the use of multiple display devices with 50/50 mirrors are routine in the art as is evident from the teaching of Ricks (US 4,190,856). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Allard (US 4,743,964) by including multiple display devices with associated beamsplitters in place of the individual display devices of Allard (US 4,743,964). The ordinary artisan would have been motivated to modify Allard (US 4,743,964) in order to provide composite or color images to the viewer.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney E Fuller whose telephone number is 703-306-5641. The examiner can normally be reached on 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russ Adams can be reached on 703-308-1436. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.

Rodney E Fuller
Primary Examiner
Art Unit 2851



October 1, 2003